

REMARKS

I. Status of Claims

Without prejudice or disclaimer, the subject matter of claim 71 has been incorporated into claim 36, and claim 71 has been cancelled. Accordingly, there is no issue of new matter or written description. With this amendment, claims 36-64, 66, and 67 are pending and stand rejected.

II. 35 U.S.C. § 103 Rejection

Claims 36-64, 66, 67, and 71 are rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent Application Publication No. 2003/0059613 to Tirelli et al. ("Tirelli") in view of Japan Patent Application No. JP 2000-106041 to Otani et al. ("Otani") and International Application Publication No. WO 02/47092 to Belli et al. ("Belli"). Final Office Action dated March 9, 2011 ("Office Action"), at 2-10. Applicants respectfully disagree and traverse for the reasons of record. Nevertheless, in order to advance prosecution, Applicants have amended claim 36 to incorporate the subject matter in claim 71, now cancelled.

In relevant part, amended independent claim 36 recites a process for manufacturing a self-extinguishing cable wherein the expanded flame retardant polymeric material has an expansion degree of **30% to 50%**. Because the Office has not and cannot point to any teaching in Tirelli, Otani, or Belli, alone or in combination, that suggests this claimed element, Applicants submit that the Office cannot establish a *prima facie* case of obviousness. M.P.E.P. § 2143.03 ("All words in a claim must be considered in judging the patentability of that claim against the prior art.").

As acknowledged by the Office, Tirelli is silent regarding expansion rates, and thus, relies on Otani. Office Action at 3. The Office argues that Otani teaches “a degree of expansion of 7-15% is ideal . . . [Otani] does not exclude teaching . . . the degree of expansion above 15% . . . [and] teaches in embodiments 2 and 5 that a degree of expansion of 20% and 18% respectively, is obtained with the filler amount being 5-200 parts by weight.” Office Action at 11. While Otani may not necessarily exclude teaching a degree of expansion above 15%, Otani explicitly teaches away from expansion rates in excess of 20%. Otani at ¶¶ [0009], [0014] (explaining that “if the sheath foaming rate exceeds 20%, the tensile strength thereof falls below the **required** strength” and that “the tear load at this foaming rate is too low and the **prescribed** physical characteristics **cannot be produced**”) (emphasis added). In view of Otani, therefore, one of ordinary skill in the art would understand that expansion rates above 20% contribute to undesirable results, therefore discouraging one of ordinary skill in the art away from expansion rates of 30% to 50%.

Because Otani fails to teach a foaming rate expansion degree of 30% to 50% and explicitly teaches away from foaming rates above 20%, and Belli, like Tirelli, is silent with respect to any foaming rate, the combination of Tirelli, Otani, and Belli fails to teach all the limitations of the claims and, thus, the obviousness rejection is improper and should be withdrawn.

The lack of teaching of all the claim limitations notwithstanding, the Office also cannot show that one of ordinary skill in the art with knowledge of Tirelli, Otani, and Belli would have been motivated to modify Otani and subsequently have any reasonable expectation of success of arriving at the claimed invention. The Supreme Court has

maintained the requirement that the prior art provide some reason or motivation to arrive at the claimed invention. (*KSR*, 550 U.S. at 401 (“[I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.”)) However hindsight cannot replace motivation in the prior art to make the claimed invention. (*KSR*, 550 U.S. at 421 (cautioning against “the distortion caused by hindsight bias” and “arguments reliant upon *ex post* reasoning” in determining obviousness)).

The Office’s premise for a motivation to combine the cited references is based on the advantages of Otani. Otani expressly teaches, however, that those relied upon advantages do not apply at expansion rates above 20%. Otani at ¶¶ [0009], [0014] (explaining that “if the sheath foaming rate exceeds 20%, the tensile strength thereof falls below the **required** strength” and that “the tear load at this foaming rate is too low and the **prescribed** physical characteristics **cannot be produced**”) (emphasis added). Thus, by definition, there can be no motivation to combine/modify Otani and the rejection should be withdrawn for this additional reason. See M.P.E.P. § 2143.01 (“If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.”)

In particular, Otani’s teaching away undermines any motivation one of ordinary skill in the art would have had to modify Otani to obtain a higher expansion rate, particularly one of 30% to 50%, as claimed. In fact, a person of ordinary skill in the art reasonable expect **failure** from such a modification.

Yet, the Office contends a motivation to combine exists because:

The addition of the said foaming agent in the non-halogen flame-retarding sheath (coating) provides sufficient tensile strength so that tear nature can be improved, handling nature and workability can be raised, and fire retardancy made into a standard can be secured [0016].

Office Action at 11-12; however, this conclusion is unsupported by the cited references.

For example, Otani does not teach that improving tensile strength improves the tear nature of a composition. Rather, there is a reverse relationship (low tensile strength is easier to tear). Nevertheless, as noted by Otani and cited above, at foaming rates exceeding 20%, the tensile strength is no longer sufficient, the tear nature is too low, and the physical characteristics that provide improved handling and workability cannot be achieved. See Otani at ¶¶ [0009], [0014]. ***Hence, even the Office's expressed motivational bases do not apply when the expansion degree exceeds 20%.***

With respect to the Office's reference to fire retardancy as a motivation to combine Otani (Office Action at 11-12), the Office has either misunderstood or mischaracterized the art. There is no teaching or suggestion in Otani, Tirelli or Belli that the presence of a foaming agent has any bearing upon improved fire retardancy. Rather, Paragraph [0016] of Otani (identified by the Office) simply discusses that the fire retardant benefits of the filler (which Tirelli already has) are not lost. However, if the Office is aware of any evidence to suggest that a foaming agent has an effect on fire retardancy, then Applicants respectfully point out that "[i]f the examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affidavit or declaration setting forth specific factual statements and

explanation to support the finding. See 37 CFR 1.104(d)(2)." M.P.E.P. § 2144.03(C) (emphasis added).

Accordingly, the combination of Tirelli, Otani, and Belli fails to render the claims obvious and, thus, the rejection should be withdrawn.

III. Conclusion


In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims. If the Examiner believes a telephone conference could be useful in resolving any outstanding issues, she is respectfully invited to contact Applicants' undersigned counsel at (202) 408-4275.

Please grant any additional extensions of time required to enter the attached reply and charge any additional required fees to Deposit Account No. 06-0916.

Respectfully submitted,

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